



## DEPARTMENT OF COMMERCE

### National Institute of Standards and Technology

#### NIST's Research Data Framework

**AGENCY:** National Institute of Standards and Technology, Department of Commerce.

**ACTION:** Notice of availability; request for comment.

**SUMMARY:** The National Institute of Standards and Technology (NIST) seeks comments on NIST's Research Data Framework (RDaF or Framework). The RDaF is a tool that aims to help shape the future of open data access and research data management. A broader range of stakeholder views is needed for refining the next version of the RDaF. The current draft of the RDaF is available electronically from the NIST website at: <https://doi.org/10.6028/NIST.SP.1500-18r1>. All individuals and organizations with influence on and who are influenced by research data management are encouraged to offer their input.

#### **DATES:**

*For Comments:*

Comments must be received by 5 p.m. Eastern time on **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. Written

comments should be submitted according to the instructions in the ADDRESSES and SUPPLEMENTARY INFORMATION sections below. Submissions received after that date may not be considered.

#### **ADDRESSES:**

Comments can be submitted by either of the following methods:

- E-mail: [rdaf@nist.gov](mailto:rdaf@nist.gov). Include "Research Data Framework" in the subject line of the message.

Instructions: Attachments will be accepted in plain text, Microsoft Word, or Adobe PDF formats. Comments containing references, studies, research, and other empirical data that

are not widely published should include copies or electronic links of the referenced materials.

All submissions, including attachments and other supporting materials, will become part of the public record and subject to public disclosure. NIST reserves the right to publish comments publicly, unedited and in their entirety. Sensitive personal information, such as account numbers or Social Security numbers, or names of other individuals, should not be included. Submissions will not be edited to remove any identifying or contact information. Do not submit confidential business information, or otherwise sensitive or protected information. Comments that contain profanity, vulgarity, threats, or other inappropriate language or content will not be considered.

**FOR FURTHER INFORMATION CONTACT:** Alda Yuan, Physical Scientist, Office of Data and Informatics, National Institute of Standards and Technology, 100 Bureau Drive, Gaithersburg, MD 20899, 301-975-2451, or by email to [rdaf@nist.gov](mailto:rdaf@nist.gov).

## **SUPPLEMENTARY INFORMATION:**

### **I. Background**

NIST is leading the development of a Research Data Framework (RDaF or Framework) with involvement and input from national and international leaders in the broad research data stakeholder community. Research data is defined here as “the recorded factual material commonly accepted in the scientific community as necessary to validate research findings.”<sup>1</sup> The RDaF offers a map of the research data space, taking a lifecycle approach to organize research data-related activities and concepts. Through a community-driven process, NIST identified organizational and individual needs and activities tied to research data management. NIST’s goal is that all elements of the research data lifecycle will be defined and explained to allow for self-assessments by

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<sup>1</sup> 2 CFR 200.315(e)(3).

stakeholders, and that informative references will provide best practices, standards, and applicable research for research data management and dissemination. The RDaF includes sample “profiles” that incorporate those research data management activities associated with a given job function or role. Individual researchers and organizations involved in the research data lifecycle will be able to tailor these profiles to suit their unique needs.

The overarching goal of the RDaF is to provide stakeholders with a structured approach to develop a customizable strategy for the management of research data. The audience for the RDaF is the entire research data community, including all organizations and individuals engaged in any activities concerned with research data management, from Chief Executive Officers and Chief Data Officers to librarians and researchers.

The RDaF is driven by the research data stakeholder community who can use the framework for multiple purposes, from identifying best practices for research data management and dissemination to changing the research data culture in an organization.

To ensure that the RDaF is a consensus document, NIST has held community engagement workshops as the primary mechanism to gather stakeholder input on refinements to the [preliminary framework](#) published in February 2021. Thus far, the workshops have taken place in three phases, each resulting in further examination and refinement of the topics and subtopics in the six lifecycle stages that form the Framework Core.

Further refinement of the RDaF Core requires feedback from a broader range of potential adopters including researchers in diverse settings. NIST aims to create a flexible and modular system and the RDaF should be able to accommodate many types of research data and research tools. To this end, NIST seeks feedback on both the scope and completeness of the RDaF Core. Respondents are encouraged - but are not required - to respond to each of the questions below which are relevant to their role and their position within the research data management ecosystem. The questions are organized into

categories covering the content of the six RDaF lifecycle stages, the topics and subtopics nested within these stages, definitions, informative resources, overarching themes, and customizable profiles, which are subsets of the more than 330 stages/topics/subtopics. Civic participation and evidence-based policy making require access to research data. The RDaF will provide government agencies, public and private institutions, as well as individual citizens, with the tools and knowledge necessary to share high-quality, reproducible data more easily, equitably, and safely.

## **II. Request for Comments**

All responses that comply with the requirements listed in the DATES and ADDRESSES sections of this notice will be considered. Respondents may organize their submissions in response to this notice in any manner.

While NIST has reached a certain level of completeness as a result of extensive stakeholder engagement, this notice seeks feedback from a broader group of users, including the general public. The NIST team will carefully consider all feedback obtained through this notice in generating version 2.0 of the RDaF. However, the following questions reflect particular areas where the team would appreciate stakeholder perspective. When providing feedback addressing these specific questions, you may reference the question code to assist with consideration of your comment.

NIST is interested in receiving responses to the following questions from the stakeholder community:

### **Section 1 - Completeness and Coverage of the RDaF**

- 1.1 Are the lifecycle stages and the topics comprehensive? Are any topics missing?
- 1.2 Are the subtopics comprehensive? Are any subtopics missing?
- 1.3 Are the overarching themes comprehensive? Are any missing?
- 1.4 Is the concept of using profiles for implementing the RDaF clear? Is it useful?

1.5 Of the eight generic profiles offered, is there at least one similar to your job function? Are there any additional ones you would suggest?

1.5 Are the informative references comprehensive? Are any resources missing?

1.6 What additional organizations would you add to the key organizations in Appendix D?

## Section 2 - RDaF Content

2.1 Are the definitions offered for the topics clear, correct, and comprehensive?

2.2 Are the definitions offered for the subtopics clear, correct, and comprehensive?

2.3 Do the generic profiles for which you have personal knowledge typically cover the most relevant topics and subtopics for that role?

2.4 Are the informative references well-tailored to the topics and subtopics? Do they enable users to fully explore those topics and subtopics in greater depth?

2.5 Would a glossary with definitions of granular terms such as “tools” be helpful or redundant with the existing subtopic and topic definitions?

2.6 Does the lifecycle stage graphic (Fig.1) convey that the various stages are networked and cyclical rather than sequential and linear?

## Section 3 - Usage of the RDaF

3.1 How do you envision using the Framework?

3.2 Taking one of the generic profiles as a guide, how easy would it be for you to create a customized profile?

3.3 Do you envision using the RDaF as a guide for your individual role or as an organizational evaluation tool? What additional tools would assist in either effort?

3.4 Would you find a network graph tool that allows free exploration of the relationships among the various elements (e.g., topics, subtopics, and profiles) of the framework useful?

(Authority: 15 U.S.C. 272(b) & (c))

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